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**UNITED STATES DEPARTMENT OF COMMERCE
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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/089,312 06/02/98 FINDLATER

S CISCPO35

WM01/1106
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EXAMINER

HQM,S

ART UNIT	PAPER NUMBER
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2661

DATE MAILED:

11/06/01

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Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

SR

Office Action Summary

Application No.

09/089,312

Applicant(s)

FINDLATER ET AL.

Examiner

Shick C Hom

Art Unit

2661

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 August 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

Art Unit:

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 8-24-01 have been fully considered but they are not persuasive.
2. Applicant's arguments with respect to claims 1-16 have been considered but are moot in view of the new ground(s) of rejection.

Drawings

3. Figures 1A, 1B, and 2 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g).

4. The drawings submitted with this application were declared informal by the applicant. Accordingly they have not been reviewed by a draftsperson at this time. When formal drawings are submitted, the draftsperson will perform a review.

Direct any inquires concerning drawing review to the Drawing Review Branch (703) 305-8404.

Art Unit:

5. Applicant is required to submit a proposed drawing correction in reply to this Office action. However, formal correction of the noted defect can be deferred until the application is allowed by the examiner.

Specification

6. The abstract of the disclosure is objected to because in lines 5 spell out acronyms MAC and PHY the first time they're used for clarity, i.e. delete "MAC" and insert ---Media-specific Access Control MAC Layer---; and delete "PHY" and insert ---Physical PHY Layer---. Correction is required. See MPEP § 608.01(b).

7. The disclosure is objected to because of the following informalities: in page 1 lines 10-11, after "09/089,033 filed on June 2, 1998" insert ---now U.S. Patent No. 5,953,345--- and update status of application 09/088,956 if known. In page 1 lines 12-13 delete "(Attorney Docket Nos. CISCP032 and CISCP053, respectively) filed concurrently herewith,"

Appropriate correction is required.

8. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors.

Art Unit:

Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Objections

9. Claims 1-14 are objected to because of the following informalities: in claim 1 line 1 delete "MAC" and insert ---Media-specific Access Control MAC Layer---; and delete "PHY" and insert ---Physical PHY Layer---. In claims 2-14 line 1 delete "A method" and insert ---The method--- because it is reciting said method of claim 1. Likewise, in claims 2-14 line 1 delete "a MAC and a PHY" and insert ---said MAC Layer and said PHY Layer. Appropriate correction is required.

Claim Rejections - 35 USC § 112

10. Claim 8 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 8 lines 2-3 which recite "a 4 bit segment" is not clear as to whether it is reciting ---said each 4 bit segment--- of claim 7 line 3.

Art Unit:

11. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321© may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

12. Claim 16 is provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims y of U.S. Patent No. 5,953,345.

Although the conflicting claims are not identical, they are not patentably distinct from each other because the application's claim 16 merely broaden the scope of the U.S. Patent

No. 5,953,345 claims 17-19 by eliminating the MAC to PHY

interface being in a 10Base-T Ethernet device as in claim 17. It has been held that the omission of a element and its function is an obvious expedient if the remaining elements perform the same function as before. *In re Karlson*, 136 USPQ (CCPA). Also note

Art Unit:

Ex parte Rainu, 168 USPQ 375 (Bd. App. 1969); omission of a reference element whose function is not needed would be obvious to one skilled in the art.

13. Claims 1 and 15 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 21, 26, and 31 of U.S.

Application No. 09/088,956. Although the conflicting claims are not identical, they are not patentably distinct from each other because the application's claim 15 merely broaden the scope of the U.S. Application No. 09/088,956 claim 31 by eliminating the global clock wire for conveying the clock signal and the global synchronization pulse wire for conveying the synchronization pulse signal to the first and second MAC as in claim 31.

Likewise, the application's claim 1 merely broaden the scope of U.S. Application No. 09/088,956 claims 21 and 26 by eliminating the MAC to PHY lines being in a 10Base-T Ethernet device, and the global clock wire for conveying the clock signal and the global synchronization pulse wire for conveying the synchronization pulse signal to the MAC and the PHY. It has been held that the omission of a element and its function is an obvious expedient if the remaining elements perform the same function as before. In re Karlson, 136 USPQ (CCPA). Also note Ex parte Rainu, 168 USPQ 375 (Bd. App. 1969); omission of a reference element whose

Art Unit:

function is not needed would be obvious to one skilled in the art.

Claim Rejections - 35 USC § 102

14. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371© of this title before the invention thereof by the applicant for patent.

15. Claim 16 is rejected under 35 U.S.C. 102(e) as being anticipated by Runaldue et al.

Runaldue et al. disclose all the subject matter now claimed. Note Fig. 3 which shows the multiplexer interface between the MAC and PHY including the time-division multiplexed data and control, i.e. clock, lines for receive and transmit clearly anticipate the method of communicating between a MAC and PHY including the multiplexed receive and transmit data and the multiplexed receive and transmit control lines as in claim 16. Col. 4 lines 4-12 which recite the multiplexer being controlled by a system clock

Art Unit:

clearly anticipate the common clock as in claim 16. Col. 2 line 48 to col. 3 lines 15-20 which recite the TXCLK signal for synchronized to the network rate and the RXCLK signal which provides the reference clock used to latch incoming network data whereby the RXCLK signal is valid when the RXDATA is valid and col. 4 lines 26-33 which recite the RXDATAVALID signal that is used to determine when data on the RXDATA bus is valid clearly anticipate the receive line synchronization bit as in claims 2-3, the transmit line synchronization bit as in claims 7-8, and the receive data valid bit as in claim 4. Col. 1 line 65 to col. 2 line 10 which recite a method of indicating the speed of the line having the interfaces which provides connections between respective MAC and PHY devices whereby the interfaces operates at a first data rate having the pad member coupled to the multiplexer receiving multiplexed signals from the interfaces wherein the multiplexer operates at a second data rate being a multiple of the first data rate and col. 2 lines 48-64 which recite the using the TXCLK clock signal being synchronized to the network rate clearly anticipate the step of indicating the speed of the line as in claims 11 and 12.

Art Unit:

Claim Rejections - 35 USC § 103

16. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103© and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

17. Claims 1-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Runaldue et al. as applied to claim 16 above, and further in view of Chow et al.

Art Unit:

Runaldue et al. did not teach the 100 MHZ receive and transmit data lines as in claim 1, the interface being between a first MAC and a second MAC as in claim 15, a receive and transmit error bit as in claims 5, 10, and a carrier sense bit as in claim 6. Runaldue et al. did not teach using an elasticity buffer that is long enough and at least 27 bits long to buffer data from a data source as in claims 13-14. Runaldue et al. did not teach a transmit enable bit as in claim 9.

Chow et al. teach that it is known to provide interface between media access control MAC ports 60 and MAC ports 62 whereby each of the MAC ports 60, 62 has a receive first-in-first-out FIFO buffer and transmit FIFO buffer as shown in Fig. 3A in the field of digital and multiplex communications for the purpose of more robust method of sending and receiving data packets which clearly anticipate the interface being between a first MAC and a second MAC as in claim 15 and the elasticity buffer that is long enough to buffer data from a data source as in claim 14; further, col. 6 lines 9-27 which recite the PCI interface being a 32-bit clearly anticipate the buffer being least 27 bits long as in claim 13. Col. 7 lines 23-32 which recite generating and outputting the carrier sense signal to the MAC clearly anticipate the carrier sense bit as in claim 6.

Art Unit:

Col. 1 line 56 to col. 2 line 6 which recite the TXC line being a free running clock signal provided by the MAC to strobe out serial NRZ (Non-Return to Zero) transmit data wherein the TXE line indicates valid transmit data from the MAC and frames an entire packet and the CRS line for indicating valid data on the RXD line clearly anticipate the receive and transmit error bit as in claims 5 and 10. Col. 6 lines 28-62 which recite the interface receiving the transmit enable TXE signal clearly anticipate the transmit enable bit as in claim 9.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the 100 MHZ receive and transmit data lines, the interface being between a first MAC and a second MAC, the receive and transmit error bit, the carrier sense bit, using an elasticity buffer that is long enough and at least 27 bits long to buffer data from a data source, and the transmit enable bit as taught in Chow et al. to the system of Runaldue et al. because Chow et al. teach the desirable advantage of providing a more robust method of sending and receiving data packets and said more robust packet switching being desirable to achieve efficient system operation in Runaldue et al.

Art Unit:

Conclusion

18. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Findlater et al. disclose a reduced pin-count 10Base-T MAC to transceiver interface.

19. **Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks
Washington, D.C. 20231

or faxed to:

(703) 872-9314, (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington. VA., Sixth Floor (2600 Receptionist at (703) 305-4750).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shick Hom whose telephone number is (703) 305-4742. The examiner's regular

Art Unit:

work schedule is Monday to Friday from 8:00 am to 5:30 pm EST and out of office on alternate Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Douglas Olms, can be reached at (703) 305-4703.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

SH

October 29, 2001



DOUGLAS OLMS
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600